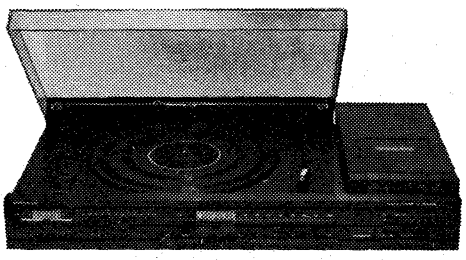
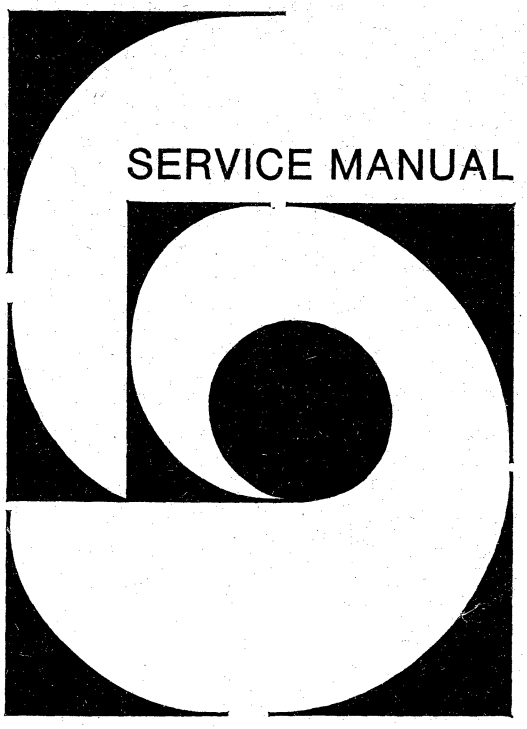
Bang & Olufsen



BEOCENTER 3600

TYPE 2611



INTRODUCTION

The Beocenter 3600 is the most recent addition to the Bang & Olufsen series of combination music systems.
The radio section and record player are identical with the Beocenter 1800 type 2610 whilst the cassette section has several features in common with the Beocord 1100 type 2612.
This service manual describes those circuits and individual components which are new in the Beocenter 3600. Otherwise reference is made to the respective section of the Beocenter 1800 and Beocord 1100 service manuals.

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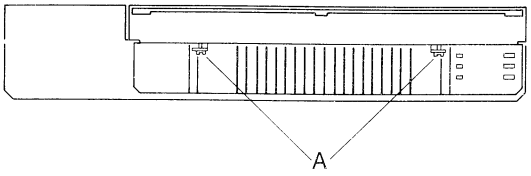
Bang & Olufsen

TECHNICAL DATA	BEOCENTER 3600
TYPE no.	**2611**
AMPLIFIER	
Power output at specified	
distortion 1000 Hz RMS	2 x 22 watts/4 ohms
	2 x 19 watts/8 ohms
Music power	2 x 40 watts/4 ohms
	2 x 25 watts/8 ohms
Speaker impedance	4 ohms
Harmonic distortion:	
1000 Hz 50 mW DIN 45 500	< 0.1%
DIN 45 500 40 - 12.500 Hz	< 0,3%
Intermodulation DIN 45 500	< 1%
Frequency range ± 1,5 dB DIN 45 500	20 - 30.000 Hz
Power bandwidth 1% distortion	10 - 35.000 Hz
Damping factor 1000 Hz DIN 45 500	> 12
Pickup low impedance	2.5 mV/47 Kohms
2 channel linear	60 mV/47 Kohms
Signal-to-noise ratio DIN 45 500:	
50 mW pickup low impedance	> 50 dB
50 mW high impedance	> 60 dB
Channel separation 1000 Hz 45 500	> 55 dB
250 - 10.000 Hz	> 45 dB
Tape	25 mV/100 Kohms
Headphones	10V/200 ohms
Bass control at 40 Hz	± 17 dB
Treble control at 12.500 Hz	± 14 dB
FM tuner	
Range	87.5 - 108 MHz
Sensitivity stereo 46 dB	30 uV/75 ohms
Frequency range ± 1.5 dB DIN 45 500	20 - 15.000 Hz ± 1.5 dB
Harmonic distortion DIN 45 500	< 0.6%
Stereo channel separation 1000 Hz	> 30 dB
Pilot suppression 19 kHz	> 35 dB
RECORD-PLAYER	
Speeds	33 - 45 rpm
Pickup cartridge	MMC 3000
Stylus	Spherical diamond
Radius of curvature	15 µm
Frequency range	16 - 25.000 Hz
Recommended stylus pressure	1.2 gram
Compliance	25×10^{-6} cm/dyn
Effective tipmass	0.5 mg
Automatic pickup movement	Yes
Automatic speed selection	Yes
Wow and flutter, DIN	< ± 0.12%
Wow and flutter, WRMS	< ± 0,06%
Rumble DIN unweighted	> 37 dB
Rumble DIN weighted	> 60 dB
Speed deviation	< 0.1%
Speed control range	> 3%
Dial for speed	Stroboscope 120 mm
Stylus pressure range	0 - 2.5 gram
Antiskating	Yes
Motor	Asynchronous
Drive system	Idler wheel and belt
Turntable	30 cm 1 kg
Dust cover	Hinged and detachable
TAPERECORDER	
Compact Cassette	C60 - C90
Tape head	Super permalloy
Dolby NR	Yes
Iron oxide tape	Yes
Chromoum dioxide tape	Yes
Indicator system	Light emitting diodes
Stop at end of tape	Yes
Wow and flutter, DIN	< ± 0.3%
Speed deviation	< ± 1%
Fast forward and rewind	90 sec.
Frequency range DIN chrom.	20 - 13.000 Hz
Signal-to-noise ratio chrom.	> 53 dB
With microphone	75 µV/10 Kohms
with Dolby chrom.	> 61 dB
Erasure	> 74 dB
Power supply	110 - 130 - 220 - 240 volts
Frequency	50 Hz
Power consumption	20 - 170 watts
Dimensions W x H x D	66 x 13.6 x 35 cm
Weight	16.9 kg

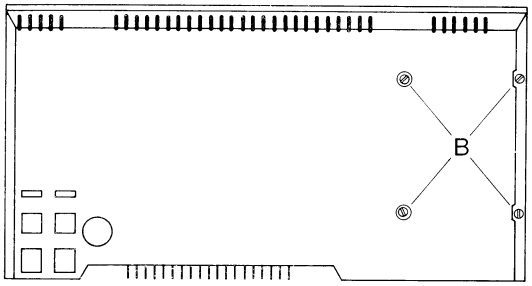
Subject to change without notice

DISASSEMBLY/ZERLEGUNG

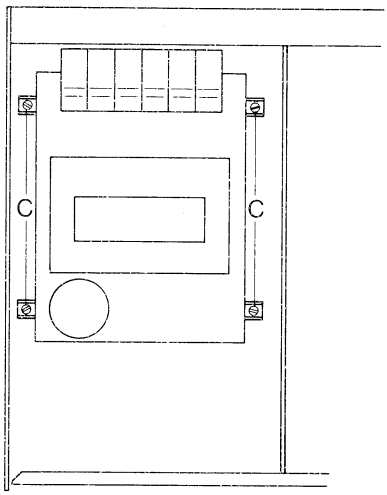
Dismounting of record player
Abmontierung von Grammophonwerk



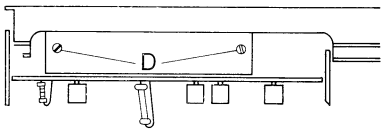
Dismounting of cassette cover
Abmontierung von Kassettendeckel

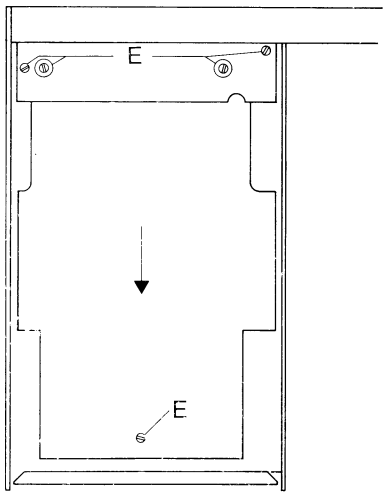


Dismounting of tape deck
Abmontierung von Kassettenwerk

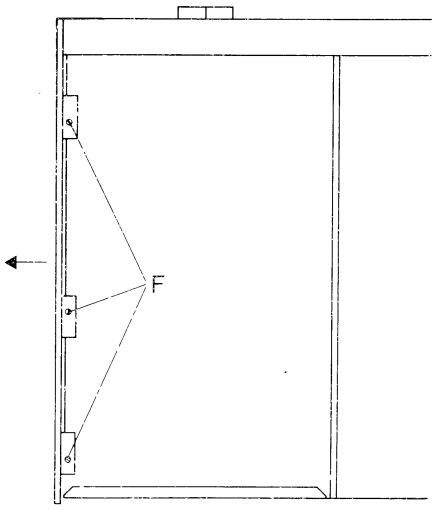


Dismounting of PC for cassette recorder
Abmontierung von Printplatte für Kassettengerät

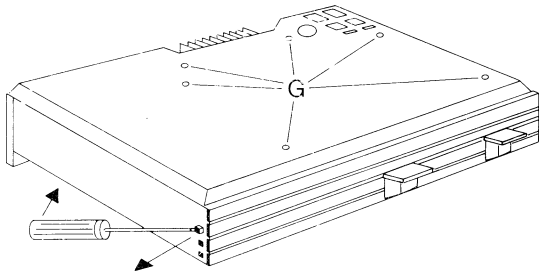




Dismounting of cabinet
Abmontierung von Kabinet



Dismounting of bottom
Abmontierung von Boden

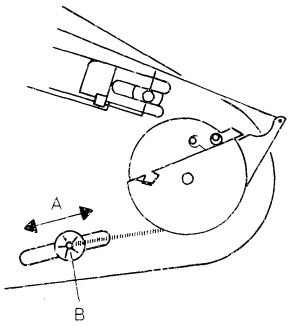


Bang & Olufsen

ELECTRICAL ADJUSTMENT RECEIVER

Is made as described in service manual for Beocenter 1800 page 4-1 and 4-2.

MECHANICAL ADJUSTMENT GRAMMOFONE CHASSIS



Put test record 3621001 on turntable.
Play cut 4.
Connect oscilloscope to right and left channels of the pickup leads.
Push pin B as indicated by arrow A until the two channels have identical distortion.

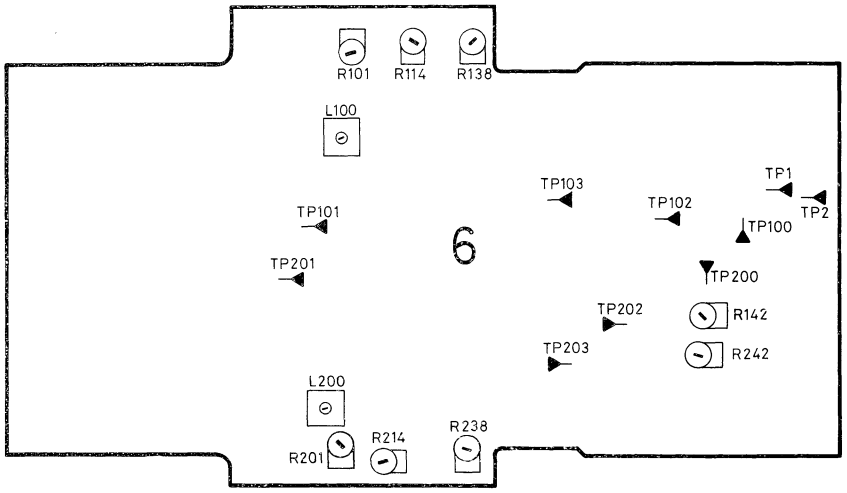
Other adjustments are performed as described in Beocenter 1800 manual, pages 5-1 to 5-3.

ELECTRICAL ADJUSTMENTS

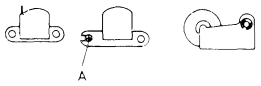
TAPE RECORDER

Non-bracketed references apply to left channel; bracketed ones apply to right channel.

Azimuth



Demagnetise sound head and erase head.
Connect AF vacuum-tube voltmeter at 6TP100 (6TP200).
Insert azimuth tape 6780036.
Adjust screw A for max. response in both channel and identical output for left and right channels (mean value).
Lock screw A with glue.



19 kHz filter

Connect tone generator at 6TP1 (6TP2). Set generator to deliver 19 kHz 100 mV.
Set 6R101 (6R201) to mid-scale.
Connect AF vacuum-tube voltmeter at 6TP102 (6TP202).
Adjust 6L100 (6L200) for min. AF vacuum-tube voltmeter reading.

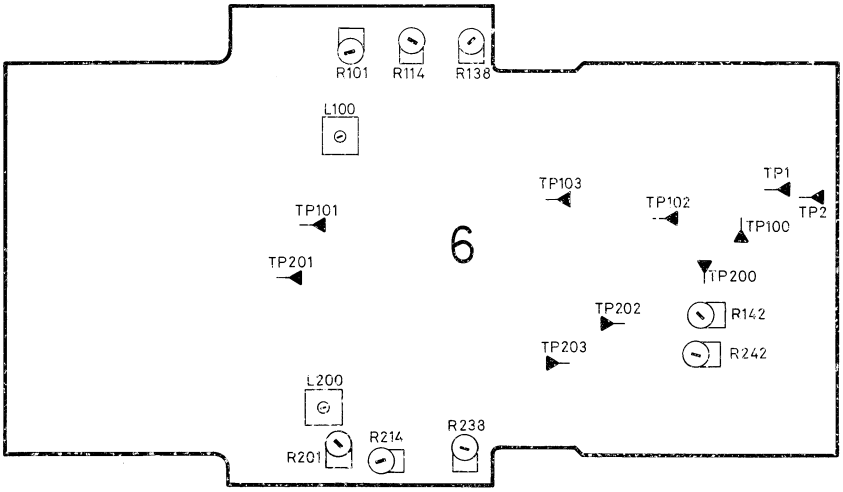
Playback level

Insert Pegel tape (333 Hz), 6780035.
Adjust 6R101 for 720 mV as measured with AF vacuum-tube voltmeter at 6TP100.
Adjust (6R201) for 720 mV as measured at (6TP200).

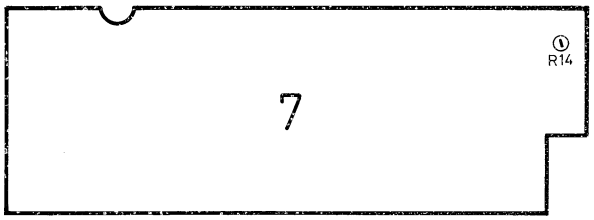
Playback frequency response

Activate CrO_2.
Insert playback frequency tape 6780056 (time constants 70 µsec and 3180 µsec).
Adjust 6R114 so that 12.5 kHz level is max. 1.5 dB below 250 Hz level as measured with AF vacuum-tube voltmeter at 6TP100 (6R214 at 6TP200).

Indicator and record amplifier



Stop erase generator (short-circuit 6C7).
Set tone generator to deliver 333 Hz 100 mV as measured with AF vacuum-tube voltmeter at 6TP1.
Connect AF vacuum-tube voltmeter at 6TP103.
Set record potentiometer so that 3V is measured at 6TP103.



Adjust 7R14 so that first red LED lights.
Back off tone generator 20 dB.
Read and note voltage at 6TP103.
Set tone genrator to deliver 12.5 kHz.
Adjust 6R138 so that 12.5 kHz level at 6TP103 is 14 dB higher than 333 Hz level.
Set tone generator to deliver 333 Hz 100 mV as measured with AF vacuum-tube voltmeter at (6TP2).
Connect AF vacuum-tube voltmeter at (6TP203).
Set record potentiometer so that 3V is measured at (6TP203).
Back off tone generator 20 dB.
Read and note voltage at (6TP203).
Set tone generator to deliver 12.5 kHz.
Adjust (6R238) so that 12.5 kHz level at (6TP203) is 14 dB higher than 333 Hz level.
Remove short-circuit from across 6C7.

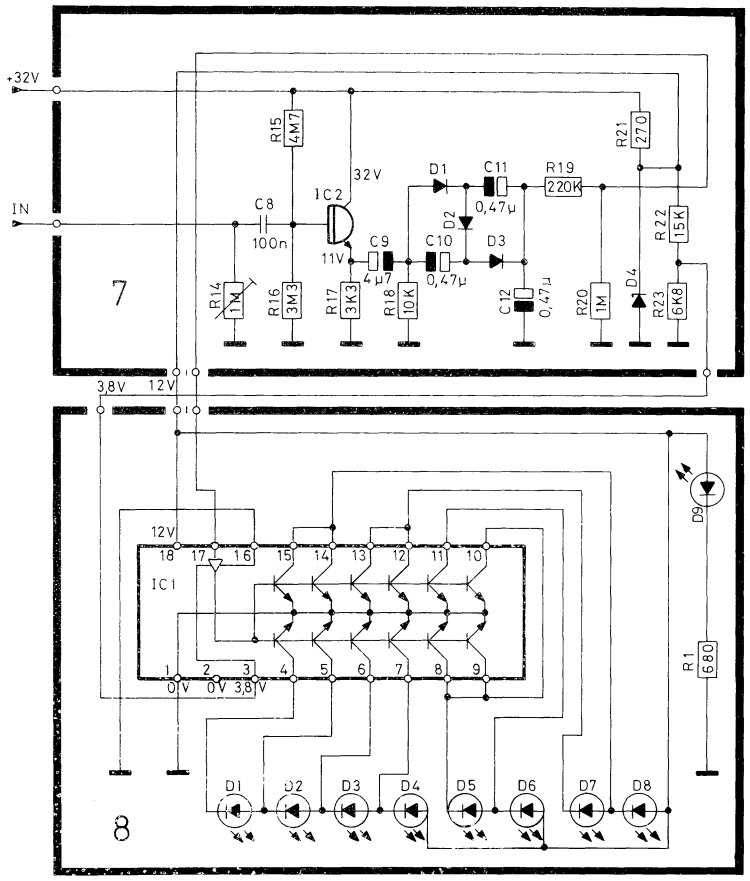
Bias

Set tone generator to deliver 333 Hz 100 mV as measured with AF vacuum-tube voltmeter at 6TP1 (6TP2).
Connect AF vacuum-tube voltmeter at 6TP100 (6TP200).
Insert standard tape 6780040.
Adjust record potentiometer so that first red LED only just lights.
Back off tone generator 20 dB.
Record and play back 333 Hz and 12.5 kHz. Adjust 6R142 (6R242) so that 12.5 kHz level is 2.5 dB below 333 Hz level.

ELECTRICAL DESCRIPTION

CASSETTE RECORDER

Indicator



The recording level in Beocenter 3600 is indicated by means of light diodes (LED).
The LF signal on the output of the recording amplifier is led to basis of 7IC2 which is coupled as emitter follower. The signal is led to the voltage tripler 7D1, 7D2, 7D3, 7C10, and 7C11. 7C12 is charged to a varying DC voltage, the value of which is directly dependent on the amplitude of the LF signal, and is led to a DC amplifier in 8IC1, pin 17. A reference voltage 3.8 Volts on pin 3 determines the range of variation of the indicator.

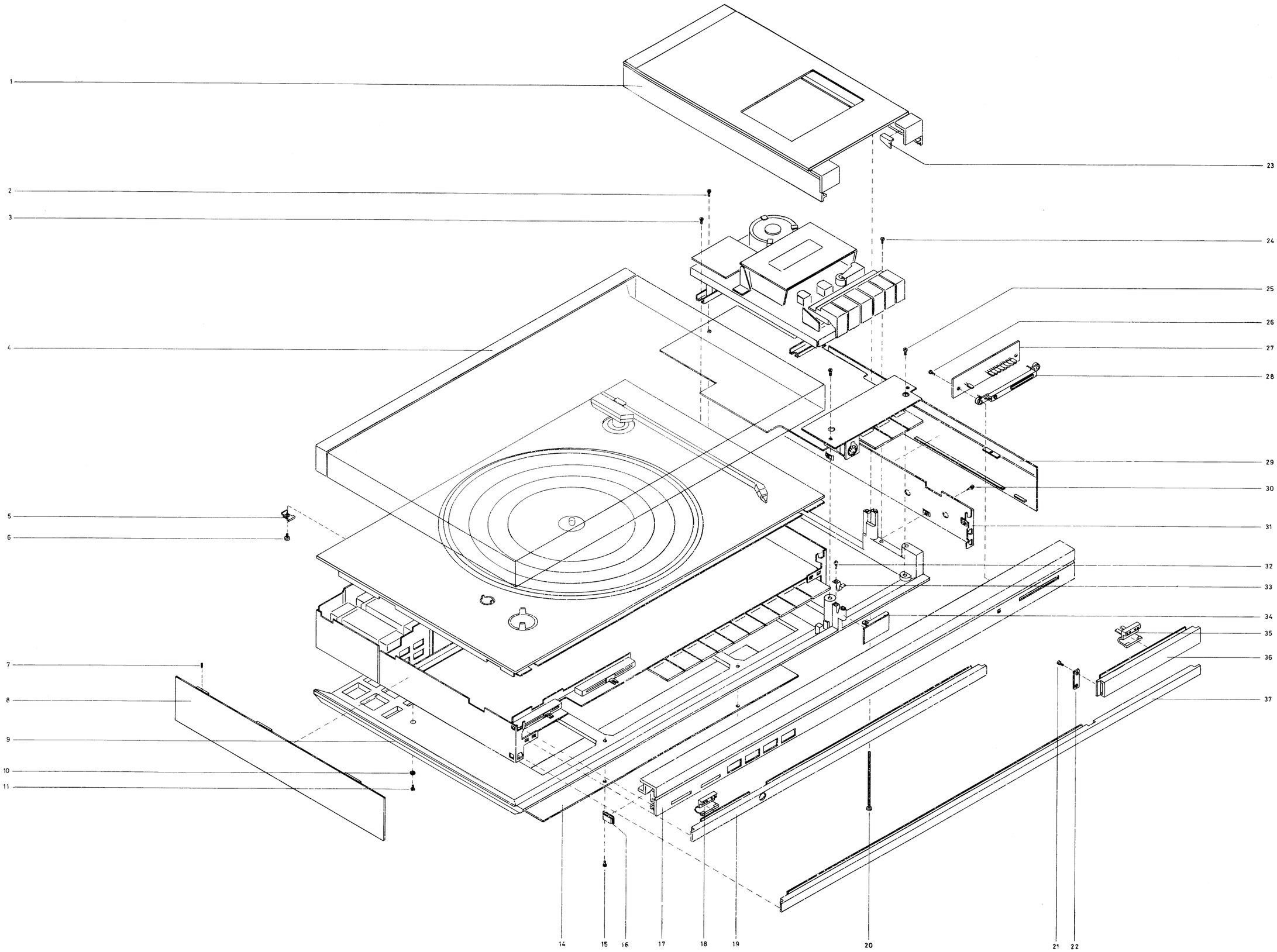
The output of the DC amplifier is led to basis on a number of switch transistors so that the outputs on 8IC1 are short-circuited to chassis at increasing voltage in the order pin 15, 14, 13, etc. I.e., 8D8 is the first green LED to switch on.

To have the same dial diviasion on the LED indicator as on a VU meter instrument each of 8D5 - 8D8 is connected to two outputs on 8IC1.
8D1 and 8D2 indicate overload. 8IC1 is provided with a constant-current generator so that a short-circuited LED will not damage the IC.

Other circuits of the cassette recorder unit are described in the service manual for Beocord 1100 page 6.

MECHANICAL PARTS LIST

1	2568451	Top moulding
	2560050	Decorative list
2	2038247	Screw AM 3×6 DIN 84
3	2038247	Screw AM 3×6 DIN 84
4	3164290	Dust cover, complete
	3164291	Dust cover, loose
	2560053	Decorative list
	3010007	Stop for cover
	2819133	Spring for cover
5	2640034	Clamp
6	2042244	Screw AM 4×6 DIN 84, black
7	2070701	Threaded pin M 3×4
8	3412331	Cabinet teak
	3412333	Cabinet rosewood
9	3454204	Bottom
10	2622015	Washer
11	2038214	Screw AM 3×8 DIN 84
14	3302273	Cover plate
15	2038247	Screw AM 3×6 DIN 84
16	3300057	Screw
17	2568316	Front moulding
18	3015071	Slide for button
19	2568240	Front moulding
20	2042026	Screw AM 4×75 DIN 84
22	2641084	Clamp
23	3300037	Screen
24	2038247	Screw AM 3×6 DIN 84
25	2038247	Screw AM 3×6 DIN 84
26	2038061	Screw AM 3×10 DIN 84
27	8004160	PC unit
28	3322045	Cover
29	3412331	Cabinet, teak
	3412333	Cabinet, rosewood
30	2015006	Screw 9,5×3,5 DIN 7981
31	2548128	Bracket
32	2015006	Screw 9,5×3,5 DIN 7981
33	2816140	Spring
34	3164251	Cover
35	3015074	Slide for button
36	2568331	Front moulding
37	2568319	Front moulding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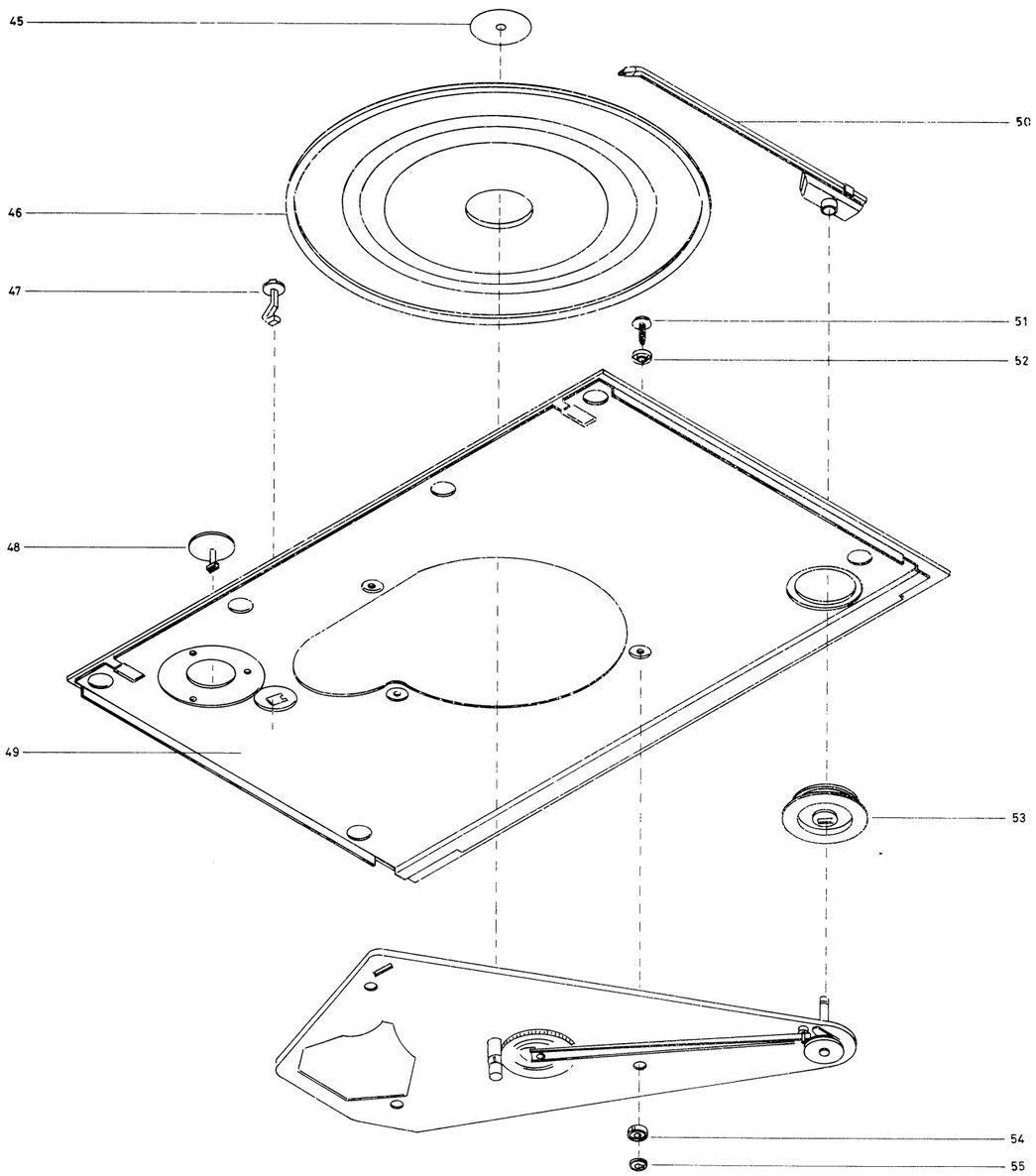
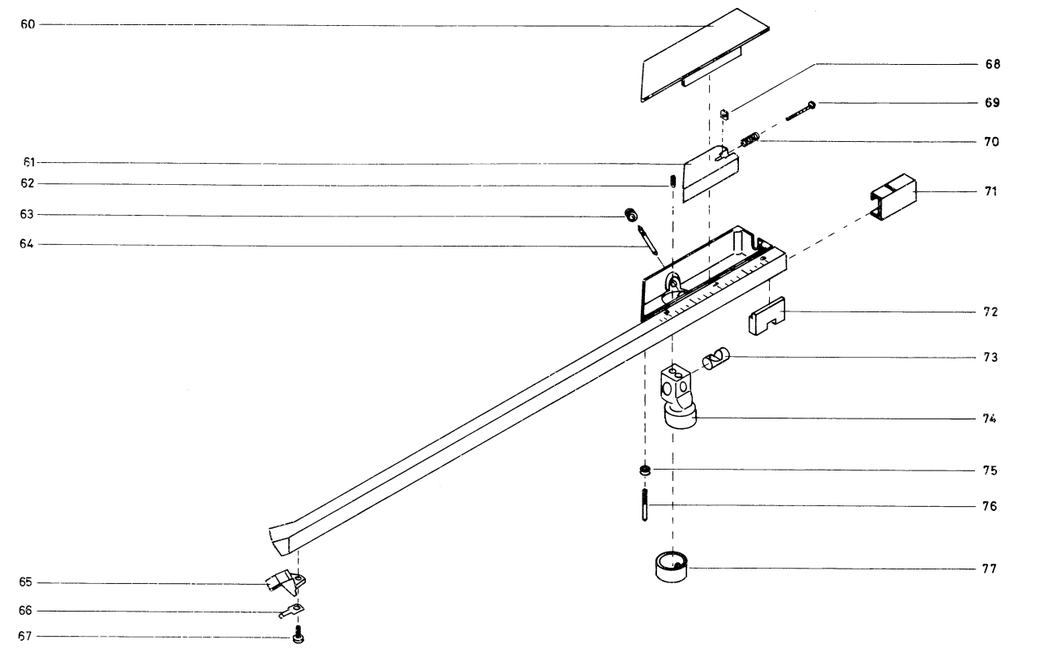
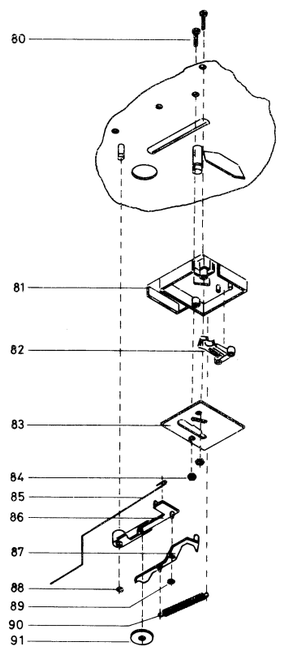
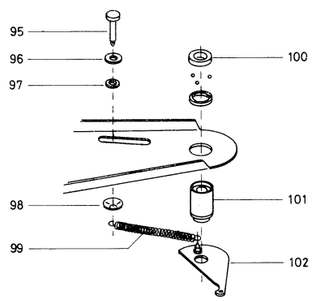


45	2805022	Washer	65	7200037	Socket with leads	87	2853043	Switch arm
46	2726108	Turntable	66	2816143	Frame spring	88	2390002	Locking disc 3,2
47	2770184	Button, speed adjustment	67	2033007	Screw	89	2390001	Locking disc 2,3
48	2775518	Lift button	68	2380068	Nut	90	2819122	Spring
49	3458189	Top plate	69	2034913	Screw	91	2622246	Washer
50	2850090	Pickup arm	70	2812072	Spring	95	2992073	Pin
	8954390	Pickup unit MMC 3000	71	3190064	Pointer	96	2622013	Washer
51	2046204	Screw, transport protection device	72	3342033	Counterweight	97	2620067	Washer
52	2938110	Washer for transport protection device	73	3151137	Holder for shaft	98	2395030	Lock disc.
			74	3152201	Holder for arm	99	2810089	Spring
52	2938110	Wascher for transport protection device	75	2938096	Bushing	100	3152224	Washer
			76	2072924	Adjustment screw	101	2938135	Pile bearing
53	2623032	Lifting ring	77	2938126	Bushing		2938136	Pick-up arm bearing Complete
54	2938100	Bushing, lock	80	2038222	Screw AM 3×14 DIN 84			
55	2622228	Washer	81	3131121	Switch housing	102	2851095	Arm
60	3162121	Cover	82	7402081	Micro switch			
61	3342034	Counterweight	83	3162095	Cover			
62	2070400	Threaded pin	84	2380011	Nut M3			
63	2905071	Pivot bearing	85	2570056	Arm			
64	2834060	Shaft	86	2853042	Arm			



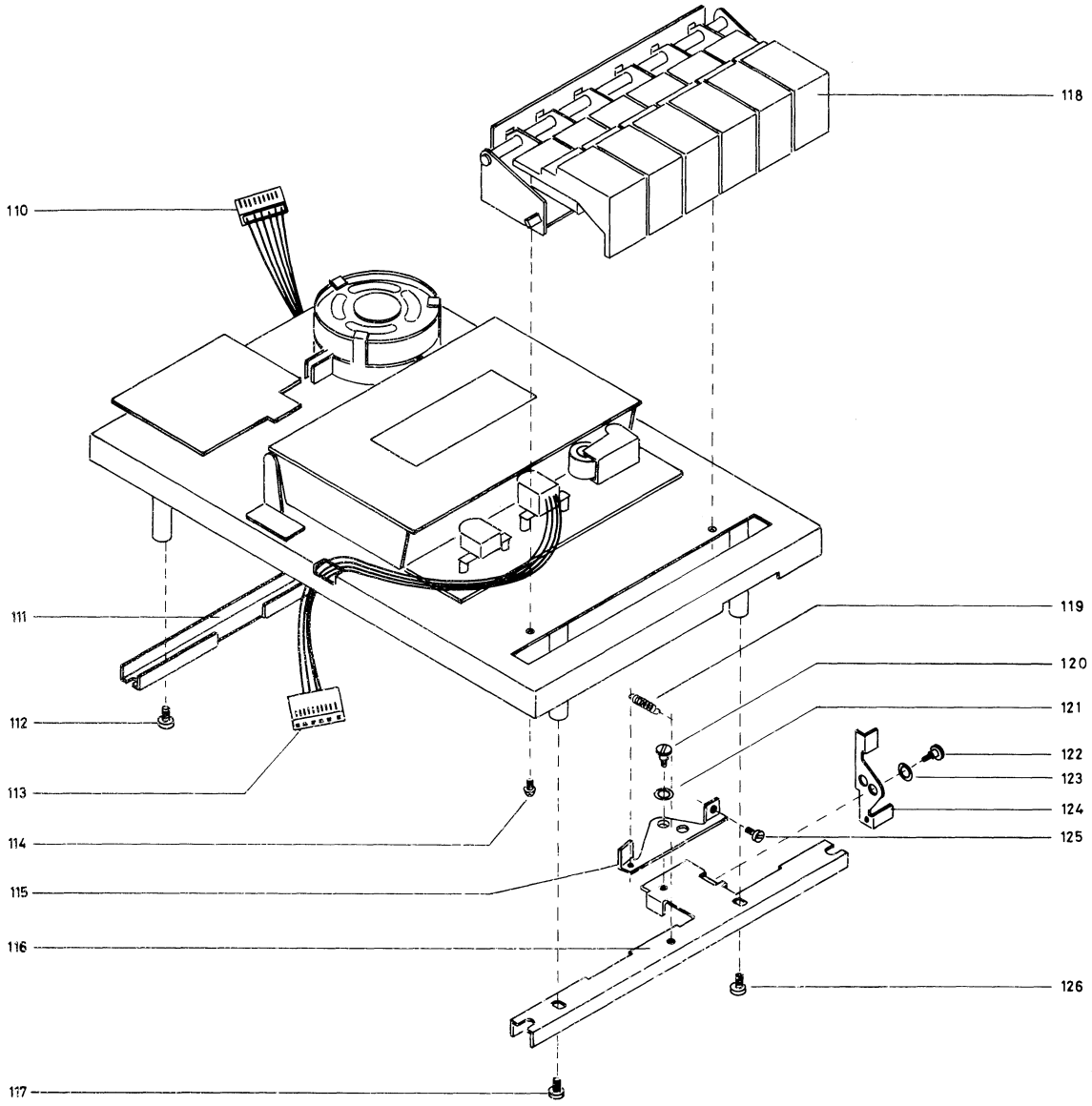




110	7210129	Socket
111	2548126	Bracket
112	2042205	Screw AM 4×6 DIN 84
113	7210129	Socket
114	2036008	Screw AM 2,6×5
115	2542429	Bracket
116	2548129	Bracket
117	2042205	Screw AM 4×6 DIN 84
118	7410014	Pushbutton unit with buttons
	2775519	Button ≪
	2775520	Button ≫
	2775521	Button >
	2775522	Button — Eject/Stop
	2775523	Button — Pause
	2568351	Button — Record
119	2810085	Spring
120	2038066	Screw
121	2622265	Washer
122	2038066	Screw
123	2622265	Washer
124	2542456	Bracket
125	2038247	AM 3×6 DIN 84
126	2042205	Screw AM 4×6 DIN 84
135	8004152	PC unit
136	7220117	Plug
137	7220116	Plug
138	7400130	Switch without spring
139	7400131	Switch with spring
140	7220116	Plug
141	2038206	Screw AM 3×4 DIN 84
142	2013906	Screw 2,84×6,35 ART 4271
143	8004151	PC unit
144	7400152	Switch
145	7210127	Socket
146	7400141	Switch complete
147	2542424	Bracket
148	2038247	Screw AM 3×6 DIN 84

PARTS NOT SHOWN

3391480	Outer carton
3397274	Foam packing, lid
3397275	Foam packing, lid
3397276	Insertion
3532119	Instruction diagram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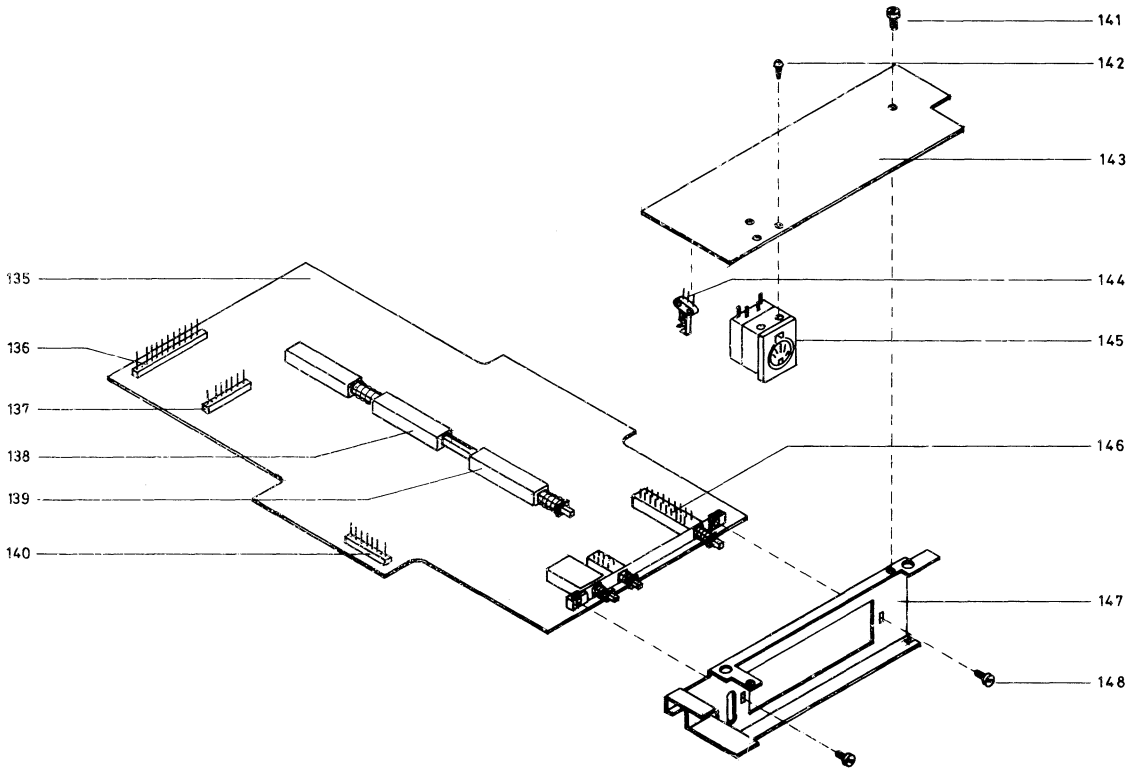
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CONDITIONS OF MEASUREMENT FOR DIAGRAM 1 AND 2

All DC voltages are measured in proportion to chassis with voltmeter (inner resistance 11 MOhms).
DC voltages are measured with the receiver in position FM and an aerial Signal of 500 µV (1 mV EMK) with pilot signal, volume on 0.
FM sensitivities are measured at Δf 40 kHz, f mod. 1 kHz and 10W output.
AF sensitivities are measured at 22W output. Balance, bass, treble on 0, volume on max.
Output loaded with 4 Ohms, input 1 kHz.
Mechanical switches are shown in neutral position.

FM SENSITIVITIES

2TP1	60 µV (10.7 MHz) through 0.1 µF, RG 75 Ohms.
2TP2	170 µV (10.7 MHz) through 0.1 µF, RG 75 Ohms.
2TP3	600 µV (10.7 MHz) through 0.1 µF, RG 75 Ohms.

AF SENSITIVITIES

4TP100	2.5 mV
4TP200	2.5 mV
2TP100	135 mV
2TP200	135 mV
2TP101	150 mV
2TP201	150 mV
5TP100	500 mV
5TP200	500 mV

NO-SIGNAL CURRENT

5TP101	10 mV
5TP201	10 mV or:

25 mA in the collector of 5IC101, 5IC201

MESSBEDINGUNGEN FÜR SCHALTBILD 1 UND 2

Alle DC Spannungen sind in Verhältnis zu Chassis mit Voltmeter (innerer Widerstand 11 MOhm) gemessen.
DC Spannungen sind mit dem Empfänger in Stellung FM und dem Antennensignal von 500 µF (1 mV EMK) mit Pilotton gemessen, Volume auf 0.
UKW Empfindlichkeiten sind an Δf 40 kHz, f mod. 1 kHz und 10W Ausgang gemessen.
NF Empfindlichkeiten sind an 22W Ausgang gemessen. Balance, Tiefton, Diskant auf 0, Volume auf max. Ausgang mit 4 Ohm, Eingang 1 kHz belastet.
Mechanische Umschalter sind in neutraler Stellung gezeigt.

UKW EMPFINDLICHKEITEN

2TP1	60 µV (10,7 MHz) durch 0,1 µF, RG 75 Ohm.
2TP2	170 µV (10,7 MHz) durch 0,1 µF, RG 75 Ohm.
2TP3	600 µV (10,7 MHz) durch 0,1 µF, RG 75 Ohm.

NF EMPFINDLICHKEITEN

4TP100	2,5 mV
4TP200	2,5 mV
2TP100	135 mV
2TP200	135 mV
2TP101	150 mV
2TP201	150 mV
5TP100	500 mV
5TP200	500 mV

LEERLAUFSTROM

5TP101	10 mV
5TP201	10 mV oder:

25 mA im Kollektor von 5IC101, 5IC201.

DIAGRAM 1

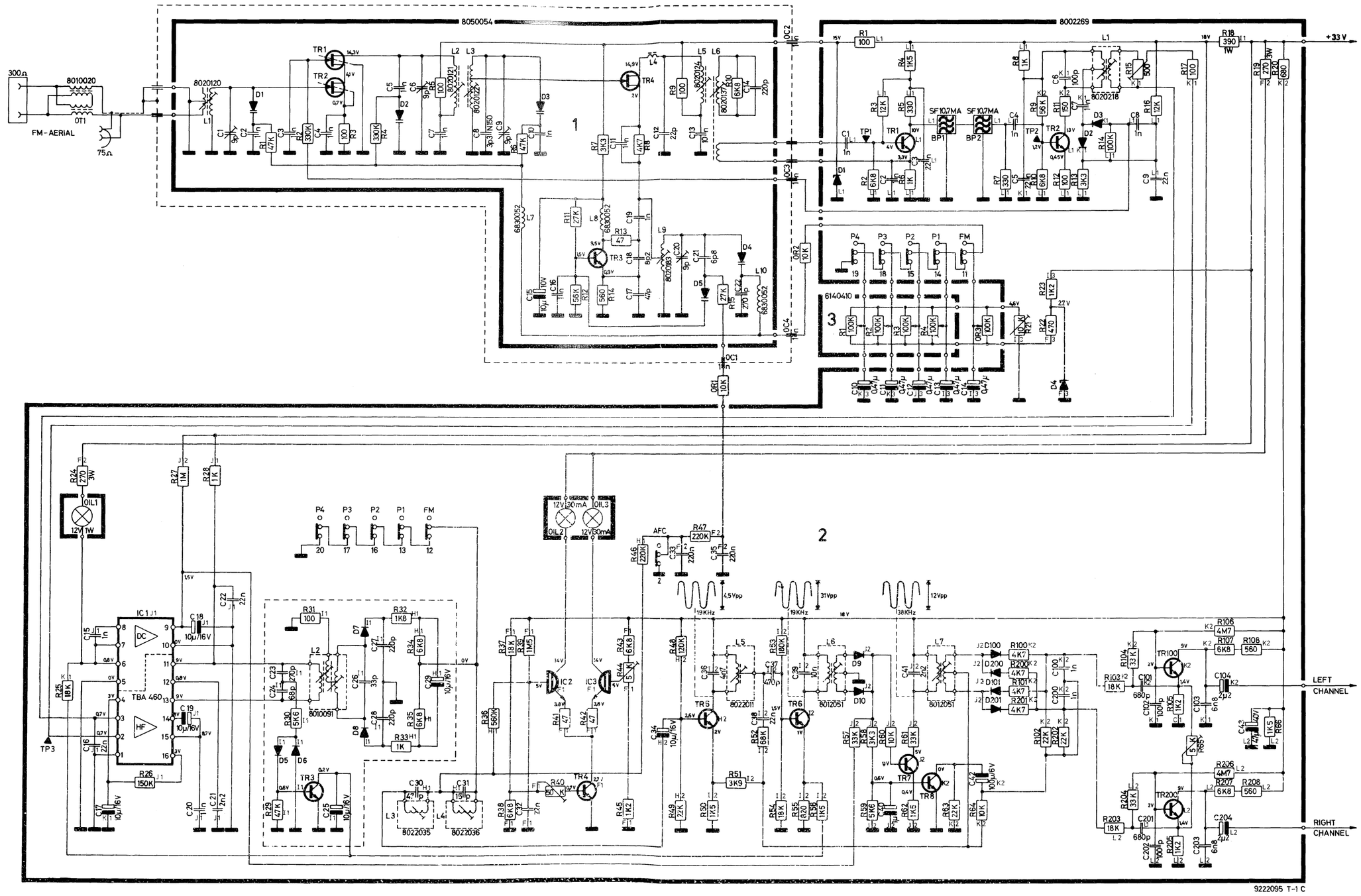
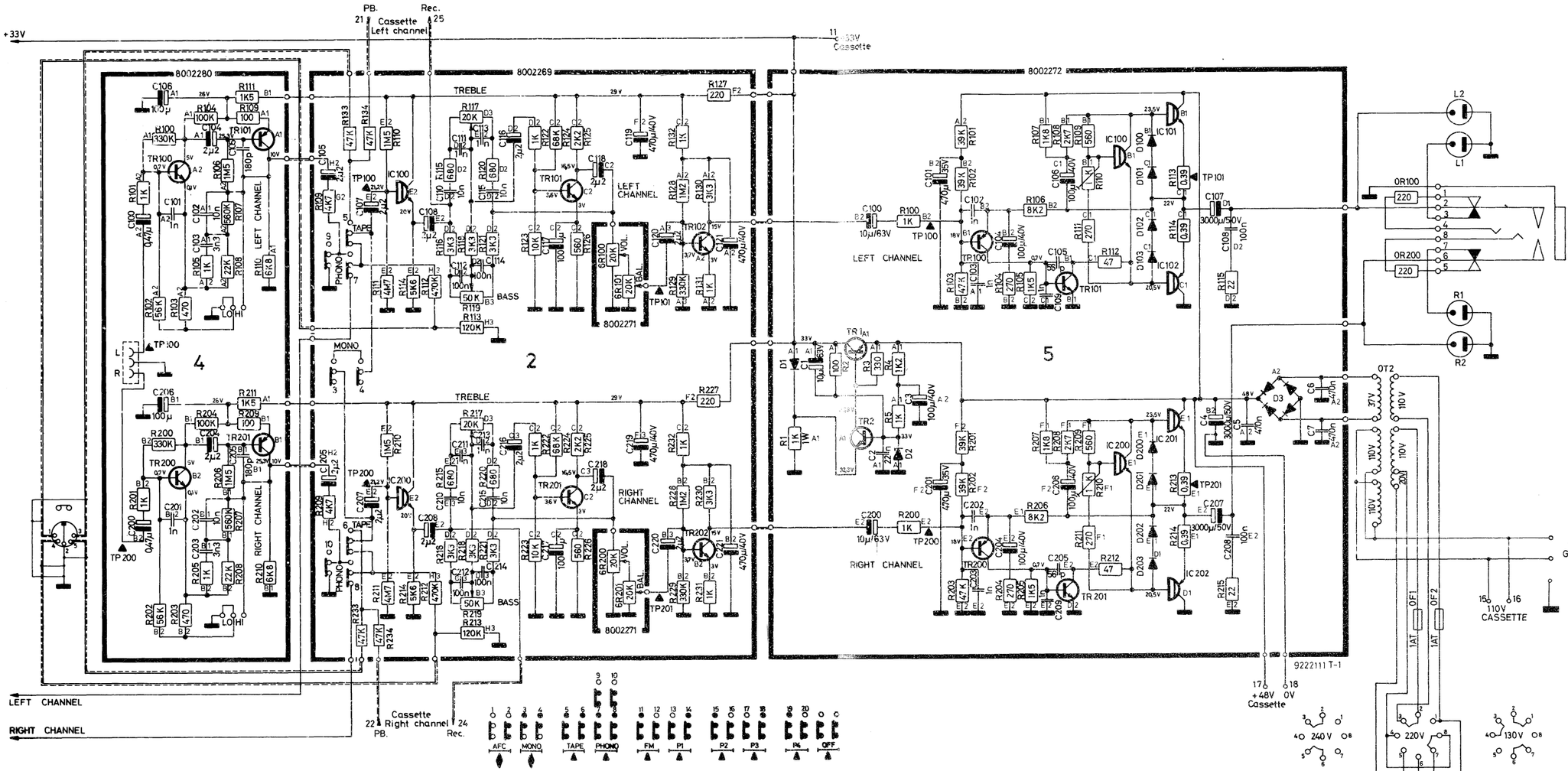
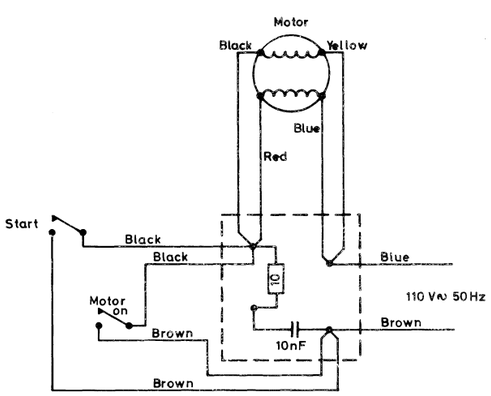
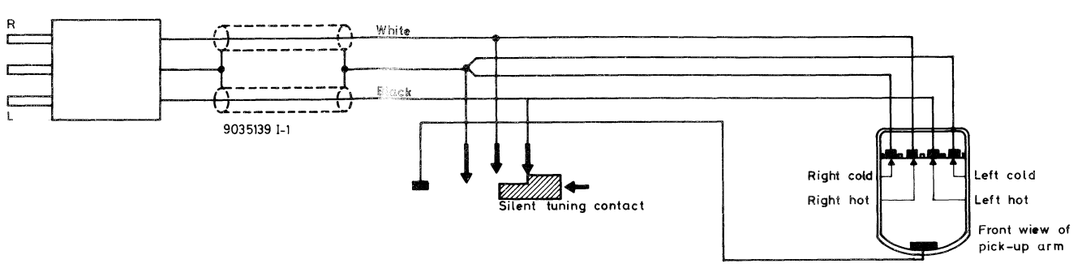

8050054
8002269
FM-AERIAL
300Ω
75Ω
8010020
8020120
TR1
TR2
TR3
TR4
TR5
TR6
TR7
TR8
TR100
TR200
IC1 J1
IC2
IC3
TBA 460
DC
HF
8020121
8020122
8020124
8020137
8020183
6830052
8010091
8022011
8012051
8020218
8022035
8022036
6140410
SF10.7MA
BP1
BP2
+33 V
LEFT CHANNEL
RIGHT CHANNEL
TP1
TP2
TP3
P4
P3
P2
P1
FM
AFC
OIL1
OIL2
OIL3
12V 1W
12V 30mA
4,5Vpp
31Vpp
12Vpp
19KHz
38KHz
9222095 T-1 C

DIAGRAM 2


+33V
PB.
Rec.
21
25
Cassette
Left channel
11
33V
Cassette
8002280
8002269
8002272
8002271
TREBLE
BASS
LEFT CHANNEL
RIGHT CHANNEL
TAPE
PHONO
MONO
VOL.
BAL.
TP100
TP101
TP200
TP201
IC100
IC101
IC102
IC200
IC201
IC202
TR100
TR101
TR200
TR201
TR202
TR1
TR2
4
2
5
0R100
0R200
220
L1
L2
R1
R2
0T2
D3
110 V
GRAMM.
110V
CASSETTE
9222111 T-1
17
+48V
Cassette
18
0V
1AT
0F1
0F2
ON/OFF
240 V
220V
130V
110V
LEFT CHANNEL
RIGHT CHANNEL
Cassette
Right channel
22
24
PB.
Rec.
AFC
MONO
TAPE
PHONO
FM
P1
P2
P3
P4
OFF

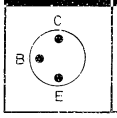
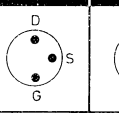
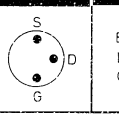
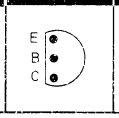
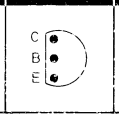
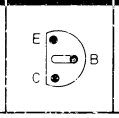
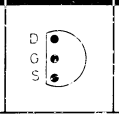
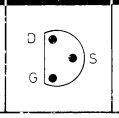
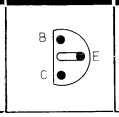
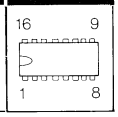

Motor
Black
Yellow
Blue
Red
Start
Black
Black
Blue
Motor on
Brown
Brown
10nF
10
110 V~ 50 Hz
Brown


R
L
White
Black
9035139 1-1
Silent tuning contact
Right cold
Right hot
Left cold
Left hot
Front wiew of
pick-up arm

TRANSISTOR - DIODE - IC LIST FOR DIAGRAM 1 AND 2

1TR1	8320119	8320069	20	BC 559 B	8320112	42	BF 495		
1TR2	8320119		20	BC 214 B		42	BF 255		
1TR3	8320112		18	BC 309 B					
1TR4	8320136		18	BC 253 B	8320119	4	U1981 E		
2TR1	8320089					21	2N 5245		
2TR2	8320089	8320089	42	BF 494		21	TIS 88 A		
2TR3	8320097		42	BF 254					
2TR4	8320097				8320136	4	U 1981 E		
2TR5	8320095	*8320095	20	BC 549B		5	U 1837 E		
2TR6-TR8	8320097		20	BC 184 BN		21	2N 5245		
2TR100-TR200	8320138					21	3C2		
2TR101-TR201	8320095	8320097	20	BC 547 B		22	3C2 P		
2TR102-TR202	8320097		18	BC 237 B		21	TIS 88 A		
4TR100-TR200	8320095		20	BC 171 B					
4TR101-TR201	8320069		19	BC 317 B	8320138	20	BC 183 B		
5TR1	8320269		20	BC 182 B					
5TR2	8320295		1	BC 207 B					
5TR100-TR200	8320069		20	BC 237 B					
5TR101-TR201	8320097								

* SPECIALLY SELECTED SPECIMEN. / *SPEZIELL AUSGESUCHTES EXEMPLAR

1	4	5	18	19	20	21	22	34	42	101
										

2IC1	8340014	101	TBA 460	2IC200	8340028	19	MPSA 13	5IC102	8340023	34	BD 698
						19	SPS 5418				
2IC2	8340054	19	MPSA 13					5IC200	8340028	19	MPSA 13
				5IC100	8340028	19	MPSA 13			19	SPS 5418
2IC3	8340054	19	MPSA 13			19	SPS 5418				
								5IC201	8340027	34	BD 697
2IC100	8340028	19	MPSA 13	5IC101	8340027	34	BD 697				
		19	SPS 5418					5IC202	8340023	34	BD 698

1D1	8300050	BB 103 blue
1D2	8300041	BB 103 green
1D3	8300041	BB 103 green
1D4	8300050	BB 103 blue
1D5	8300032	BA 138
2D1	8300053	ZPD 15V
		BZX 79 15V
2D2	8300131	1N 4148
2D3	8300131	1N 4148
2D4	8340081	25,7 —28,3V
2D5-D10	8300024	AA 119
2D100-D201	8300131	1N 4148
5D1	8300023	EM 502
		1N 4002
		1N 4003
5D2	8300199	33V 1W
5D3	8310020	B80C3200/2200
5D100-D203	8300131	1N 4148

8004152 PC6

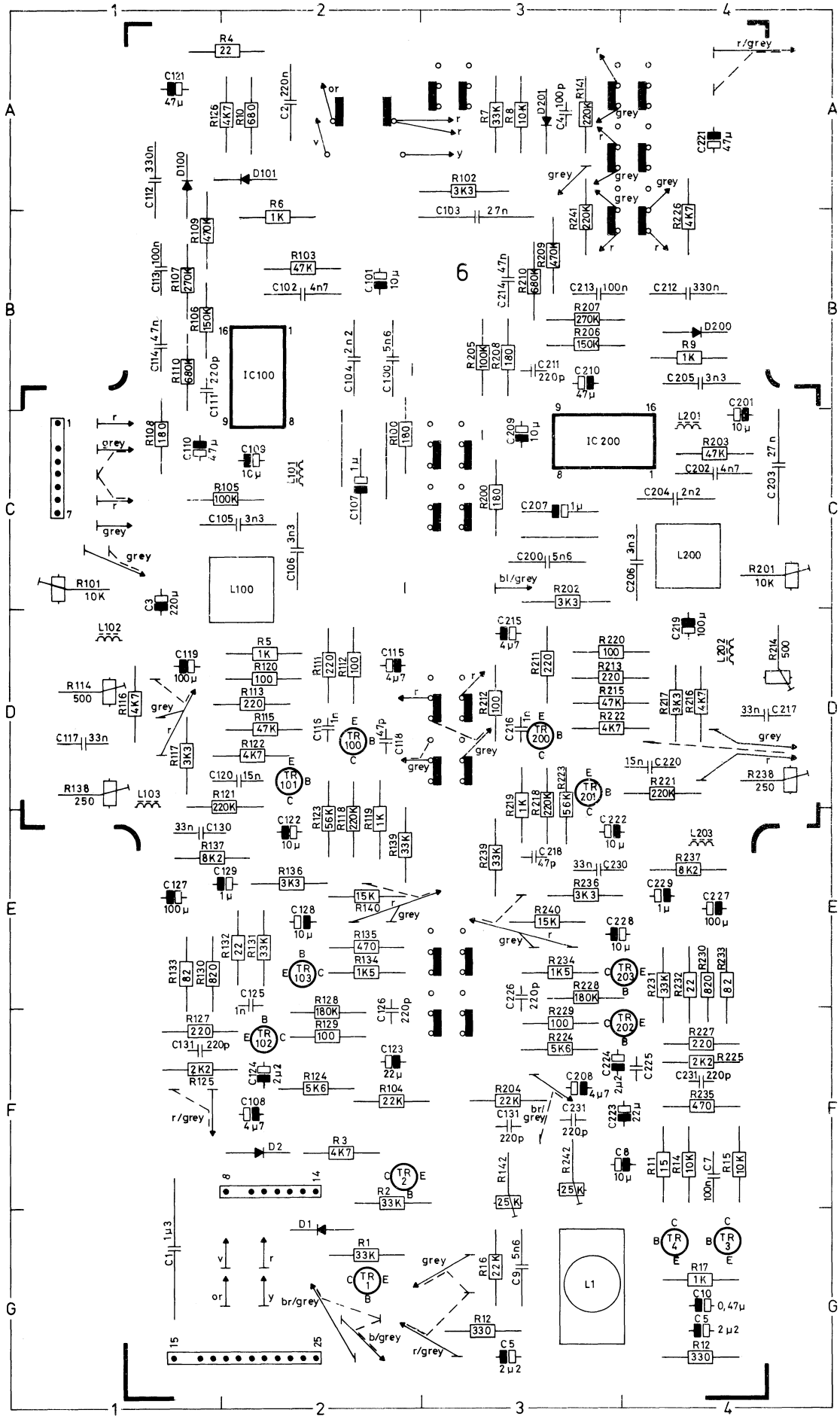
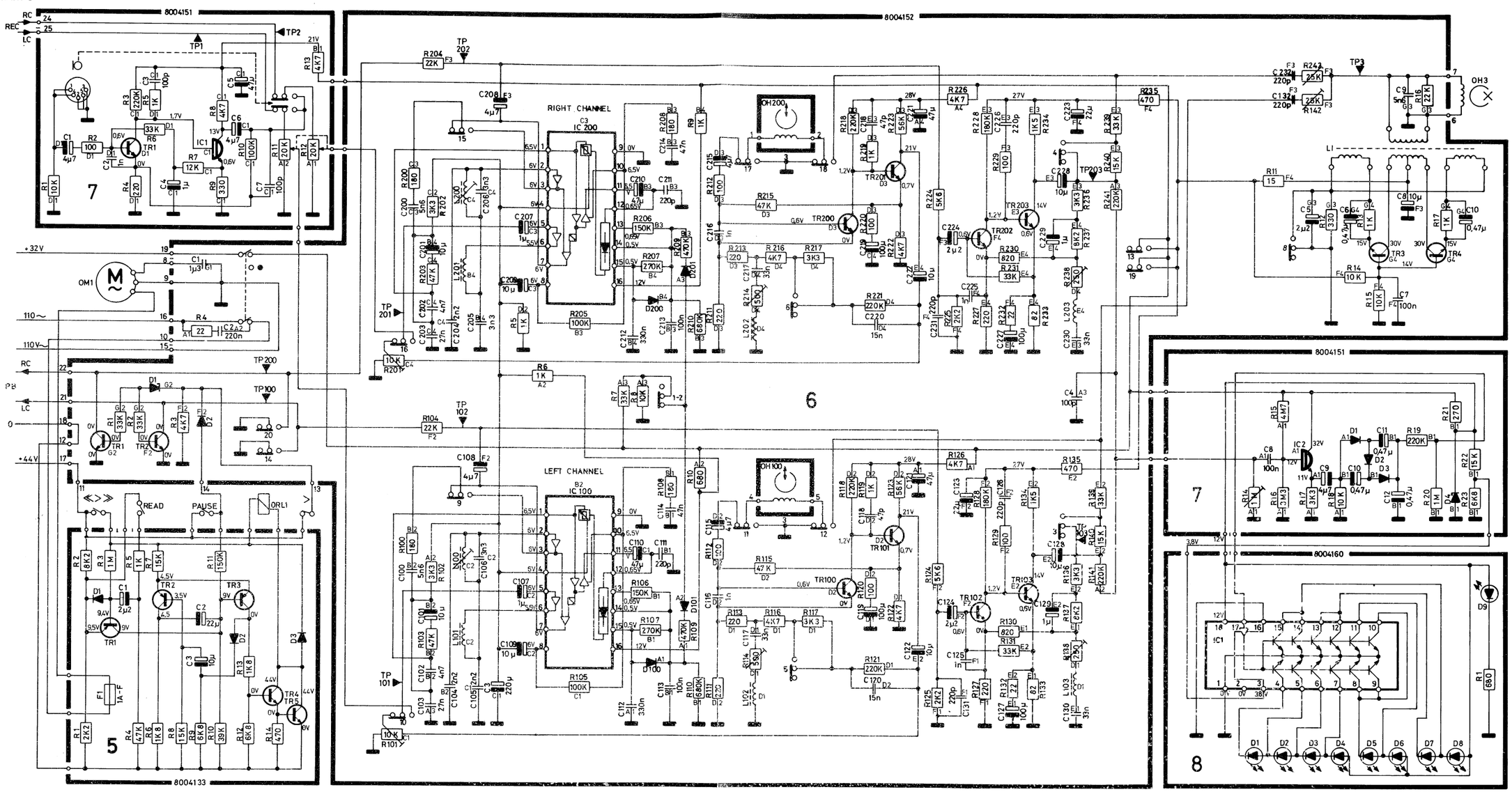

IC100
IC 200
L100
L200
L1
L101
L102
L103
L201
L202
L203
TR 100
TR 101
TR 102
TR 103
TR 200
TR 201
TR 202
TR 203
TR 1
TR 2
TR 3
TR 4
R4 22
C121 47µ
C2 220n
R126 4K7
R10 680
R7 33K
R8 10K
D201
C4 100p
R141 220K
r/grey
C221 47µ
C112 330n
D100
D101
R102 3K3
R6 1K
C103 27n
R241 220K
R226 4K7
R109 470K
R103 47K
C113 100n
R107 270K
C102 4n7
C101 10µ
C214 47n
R210 680K
R209 470K
C213 100n
C212 330n
R207 270K
R206 150K
D200
R9 1K
C205 3n3
C201 10µ
R203 47K
C202 4n7
C203 27n
R106 150K
C114 47n
R110 680K
C111 220p
C104 2n2
C100 5n6
R205 100K
R208 180
C211 220p
C210 47µ
R108 180
C110 47µ
C109 1C µ
R100 180
C209 10µ
R105 100K
C107 1µ
R200 180
C207 1µ
C204 2n2
C105 3n3
C106 3n3
C200 5n6
C206 3n3
R201 10K
R101 10K
C3 220µ
bl/grey
R202 3K3
C215 4µ7
C219 100µ
R220 100
R5 1K
R120 100
R111 220
R112 100
C115 4µ7
R211 220
R213 220
R214 500
C119 100µ
R114 500
R116 4K7
R113 220
R212 100
R215 47K
R217 3K3
R216 4K7
33n C217
C117 33n
R115 47K
C116 1n
C118 47p
C216 1n
R222 4K7
R117 3K3
R122 4K7
15n C220
C120 15n
R221 220K
R238 250
R138 250
R121 220K
R219 1K
R218 220K
R223 56K
C222 10µ
33n C130
C122 10µ
R123 56K
R118 220K
R119 1K
R239 33K
L203
R137 8K2
R139 33K
C218 47p
R237 8K2
C129 1µ
R136 3K3
33n C230
C229 1µ
C127 100µ
15K R140
R236 3K3
C227 100µ
C128 10µ
R240 15K
C228 10µ
R135 470
R132 22
R131 33K
R234 1K5
R231 33K
R232 22
R230 820
R233 82
R133 82
R130 820
R134 1K5
C226 220p
C125 1n
R228 180K
R128 180K
C126 220p
R229 100
R127 220
R129 100
R224 5K6
R227 220
C131 220p
C123 22µ
C224 2µ2
C225
R225 2K2
2K2 R125
C124 2µ2
R124 5K6
R104 22K
C231 220p
R204 22K
C208 4µ7
R235 470
r/grey
C108 4µ7
br/grey
C131 220p
C223 22µ
D2
R3 4K7
R142 25K
R242 25K
C8 10µ
R11 15
R14 10K
C7 100n
R15 10K
R2 33K
D1
C1 1µ3
R1 33K
R16 22K
C9 5nF
R17 1K
C10 0,47µ
C5 2µ2
br/grey
b/grey
r/grey
R12 330
C5 2µ2
R12 330

DIAGRAM 3



TEST POINTS

DC

The voltages on 6IC100 and 6IC200 have been measured with depressed Dolby-botton.

The voltages on 6TR102 - 6TR103, 6TR3 - 6TR4 and 6TR202 - 6TR203 have been measured in position Record.

AC

Playing back from level tape:

TP100 - TP200	700 mV
TP 101 - TP201	40 mV
TP102 - TP202	700 mV

$Cr O_2$ button depressed and recording button in max.

Recording:

TP3	65V 98 kHz
TP1 - TP2	40 mV
TP101 - TP201	40 mV
TP102 - TP202	580 mV
TP103 - TP203	3V

1 red LED must shine at mono signal

Microphone

Recording:

Microphone input	90 µV

TESTPUNKTE

DC

Die Spannungen auf 6IC100 und 6IC200 sind mit dem Dolby-Knopf eingedrückt gemessen.

Die Spannungen auf 6TR102 - 6TR103, 6TR3 - 6TR4 und 6TR202 - 6TR203 sind in Position Record gemessen.

AC

Von Pegelband wiedergeben:

TP100 - TP200	700 mV
TP101 - TP201	40 mV
TP 102 - TP202	700 mV

$Cr O_2$ knopf eingedrückt und Aufnahme Knopf in max.

Aufnehmen

TP3	65V 98kHz
TP1 - TP2	40 mV
TP101 - TP201	40 mV
TP102 - TP202	580 mV
TP103 - TP203	3V

Bei Mono-Signal muss 1 rotes LED leuchten

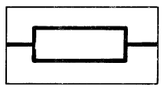
Mikrophon

Aufnehmen:

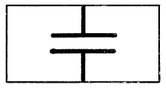
Mikrophoneingang	90 µV

ELECTRIC PARTSLIST

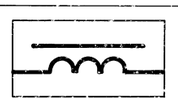
8004152 PC 6



R1	5010075	33 KOhms 5% 1/8W
R2	5010075	33 KOhms 5% 1/8W
R3	5010048	4k7 Ohms 5% 1/8W
R4	5001004	22 Ohms 10% 1/2W
R5	5001028	1 KOhms 5% 1/2W
R6	5001028	1 KOhms 5% 1/2W
R7	5001048	33 KOhms 10% 1/2W
R8	5001042	10 KOhms 10% 1/2W
R9	5001028	1 KOhms 5% 1/2W
R10	5001026	680 Ohms 10% 1/2W
R11	5001002	15 Ohms 10% 1/2W
R12	5001021	330 Ohms 10% 1/2W
R13	5010040	1 KOhms 5% 1/8W
R14	5010059	10 KOhms 5% 1/8W
R15	5010059	10 KOhms 5% 1/8W
R16	5010079	22 KOhms 5% 1/8W
R17	5010040	1 KOhms 5% 1/8W
R100-200	5010362	180 Ohms 5% 1/8W
R101-201	5370152	10 KOhms 20% 0,1W
R102-202	5010265	3k3 Ohms 2% 1/4W
R103-203	5010045	47 KOhms 5% 1/8W
R104-204	5010079	22 KOhms 5% 1/8W
R105-205	5010049	100 KOhms 5% 1/8W
R106-206	5010063	150 KOhms 5% 1/8W
R107-207	5010083	270 KOhms 5% 1/8W
R108-208	5010362	180 Ohms 5% 1/8W
R109-209	5010077	470 KOhms 5% 1/8W
R110-210	5010074	680 KOhms 5% 1/8W
R111-211	5010092	220 OHms 5% 1/8W
R112-212	5010065	100 Ohms 5% 1/8W
R113-213	5010092	220 Ohms 5% 1/8W
R114-214	5370150	500 Ohms 20% 0,1W
R115-215	5010045	47 KOhms 5% 1/8W
R116-216	5010048	4k7 Ohms 5% 1/8W
R117-217	5010076	3k3 Ohms 5% 1/8W
R118-218	5010120	220 KOhms 5% 1/8W
R119-219	5010040	1 KOhms 5% 1/8W
R120-220	5010065	100 Ohms 5% 1/8W
R121-221	5010120	220 KOhms 5% 1/8W
R122-222	5010048	4k7 Ohms 5% 1/8W
R123-223	5010061	56 KOhms 5% 1/8W
R124-224	5010041	5k6 Ohms 5% 1/8W
R125-225	5010064	2k2 Ohms 5% 1/8W
R126-226	5001038	4k7 Ohms 10% 1/2W
R127-227	5010092	220 Ohms 5% 1/8W
R128-228	5010072	180 KOhms 5% 1/8W
R129-229	5010065	100 Ohms 5% 1/8W
R130-230	5010068	820 Ohms 5% 1/8W
R131-231	5010075	33 KOhms 5% 1/8W
R132-232	5010448	22 Ohms 5% 1/8W
R133-233	5010056	82 Ohms 5% 1/8W
R134-234	5010247	1k5 Ohms 5% 1/8W
R135-235	5001024	470 Ohms 10% 1/2W
R136-236	5010076	3k3 Ohms 5% 1/8W
R137-237	5010154	8k2 Ohms 5% 1/8W
R138-238	5370059	250 Ohms 20% 0,1W
R139-239	5010075	33 KOhms 5% 1/8W
R140-240	5010053	15 KOhms 5% 1/8W
R141-241	5010120	220 KOhms 5% 1/8W
R142-242	5370153	25 KOhms 20% 0,1W

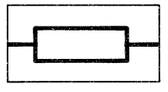


C1	4130099	1µ3 10% 170V
C2	4130082	220n 20% 250V
C4	4000069	100p 5% 63V
C5	4201069	2µ2 35V TANT.
C6	4201058	0,47 µ 35V TANT.
C7	4130103	100n 20% 250V
C8	4201065	10µ 63V
C9	4100049	5n6 1% 63V
C10	4201058	0,47 µ 35V TANT.
C100-200	4100049	5n6 1% 63V
C101-201	4201065	10 µ 63V
C102-202	4100031	4n7 1% 63V
C103-203	4100048	27n 1% 63V
C104-204	4100029	2n2 5% 63V
C105-205	4100029	2n2 5% 63V
C106-206	4100033	3n3 5% 63V
C107-207	4200333	1 µ 63V
C108-208	4201061	4µ7 63V
C109-209	4201065	10 µ 63V
C110-210	4201074	47 µ 40V
C111-211	4010021	220p 10% 100V
C112-212	4130102	330n 20% 250V
C113-213	4130103	100n 20% 250V
C114-214	4130087	47n 10% 250V
C115-215	4201061	4µ7 63V
C116-216	4010027	1n 10% 100V
C117-217	4130088	33n 10% 250V
C118-218	4000057	47p 5% 63V
C119-219	4200098	100 µ 10V
C120-220	4130097	15n 10% 250V
C121-221	4201074	47 µ 40V
C122-222	4201065	10 µ 63V
C123-223	4200100	22 µ 40V
C124-224	4201069	2µ2 35V TANT.
C125-225	4010027	1n 10% 100V
C126-226	4010021	220p 10% 100V
C127-227	4200098	100 µ 10V
C128-228	4201065	10 µ 63V
C129-229	4200325	1 µ 35V TANT.
C130-230	4130088	33n 10% 250V
C131-231	4010021	220p 10% 100V
C132-232	4010021	220 p 10% 100V

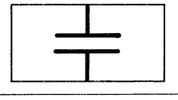


L1	8020267	
L100-200	8022067	
L101-201	8022068	
L102-202	8022043	
L103-203	8022043	

8004151 PC7



R1	5010059	10 KOhms 5% 1/8W
R2	5010065	100 Ohms 5% 1/8W
R3	5010120	220 KOhms 5% 1/8W
R4	5010092	220 Ohms 5% 1/8W
R5	5010040	1 KOhms 5% 1/8W
R6	5010075	33 KOhms 5% 1/8W
R7	5010046	12 KOhms 5% 1/8W
R8	5010048	4k7 Ohms 5% 1/8W
R9	5010044	330 Ohms 5% 1/8W
R10	5010049	100 KOhms 5% 1/8W
R11/12	5310069	20 KOhms
R13	5001038	4k7 Ohms 10% 1/2W
R14	5370049	1 MOhms 20% 0,1W
R15	5011078	4M7 Ohms 10% 1/4W
R16	5010381	3M3 Ohms 10% 1/4W
R17	5010076	3k3 Ohms 5% 1/8W
R18	5010059	10 KOhms 5% 1/8W
R19	5010120	220 KOhms 5% 1/8W
R20	5010054	1 MOhms 5% 1/8W
R21	5100084	270 Ohms 10% 2W
R22	5010053	15 KOhms 5% 1/8W
R23	5010052	6k8 Ohms 5% 1/8W

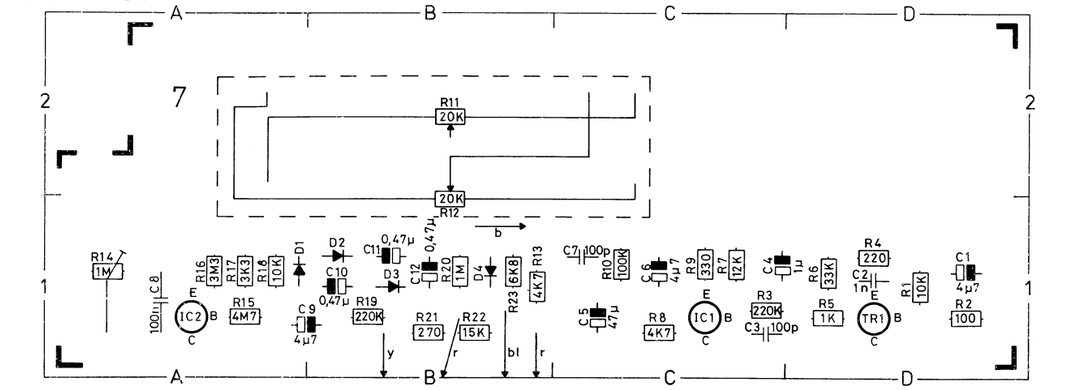


C1	4201061	4µ7 63V
C2	4010027	1n 10% 100V
C3	4000069	100p 5% 63V
C4	4200298	1 µ 63V
C5	4201074	47 µ 40V
C6	4201061	4µ7 63V
C7	4000069	100p 5% 63V
C8	4130103	100n 20% 250V
C9	4201061	4µ7 63V
C10	4201058	0,47 µ 35V TANT.
C11	4201058	0,47µ 35V TANT.
C12	4201058	0,47 µ 35V TANT.

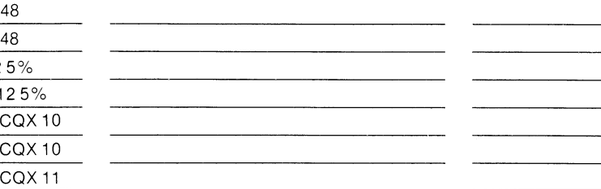
8004160 PC8

R1	5001026	680 Ohms 10% 1/2W

8004151 PC 7



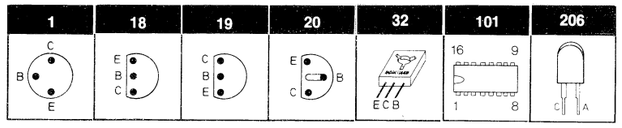
8004160 PC 8



TRANSISTOR - DIODE - IC LIST FOR DIAGRAM 3

5TR1-TR3	8320104		*8320095	**20**	BC 549 B	8320104	**20** BC 558 B
5TR4	8320097			**20**	BC 184 BN		**20** BC 212 B
5TR5	8320292						**20** BC 252 B
6TR1-TR2	8320097		8320097	**20**	BC 547 B		**18** BC 308 B
6TR3-TR4	8320137			**18**	BC 237 B	8320137	**20** BC 182 B
6TR100-TR200	8320344			**20**	BC 171 B		
6TR101-TR201	8320095			**19**	BC 317 B	8320292	**32** BD 137
6TR102-TR202	8320095			**20**	BC 182 B		
6TR103-TR203	8320097			**1**	BC 207 B	*8320344	**20** BC 550 B
7TR1	8320344			**20**	BC 237 B		**20** BC 348 BN

*SPECIALLY SELECTED SPECIMEN. / *SPEZIELL AUSGESUCHTES EXEMPLAR



5D1	8300131	1N 4148		6IC100	8340046	**101**	NE 545 B	
5D2	8300131	1N 4148		6IC200	8340046	**101**	NE 545 B	
5D3	8300023	EM 502		7IC1	8340054	**19**	MPSA 13	
		1N 4002		7IC2	8340054	**19**	MPSA 13	
		1N 4003		8IC1	8340097	**111**	UAA 180	
6D1	8300028	9,1V 5%						
6D2	8300131	1N 4148						
6D100	8300042	OA 91						
6D101	8300131	1N 4148						
6D200	8300042	OA 91						
6D201	8300131	1N 4148						
7D1-D3	8300131	1N 4148						
7D4	8300034	ZY 12 5%						
		LMZ 12 5%						
8D1	8300255	**206**	CQX 10					
8D2	8300255	**206**	CQX 10					
8D3-D8	8300256	**206**	CQX 11					
8D9	8300255	**206**	CQX 10					